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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SOMMERFELD, PAUL J

ART UNIT

PAPER NUMBER

2168

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,860

Applicant(s)

KRISHNASWAMY ET AL.

Examiner

Paul J. Sommerfeld

Art Unit

2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01112005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 4, 5 and 18-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 5 and 20 recite a "signal embodied in a carrier medium, the signal being encoded with a sequence of instructions". Because signals, being a form of electromagnetic energy, do not fall into one of the statutory categories of 35 U.S.C. 101, the claim includes non-statutory subject matter.

Claims 4 and 18 recite a "computer-readable storage medium encoded with a sequence of instructions", which is defined on page. Because a transmission media, being a form of electromagnetic energy, do not fall into one of the statutory categories of 35 U.S.C. 101, the claim includes non-statutory subject matter.

A detailed explanation describing why carrier waves are regarded as non-statutory subject matter under 35 U.S.C. 101 follows:

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it

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does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

First, a claimed signal is clearly not a "process" under § 101 because it is not a series of steps. The other three § 101 classes of machine, compositions of matter and manufactures "relate to structural entities and can be grouped as 'product' claims in order to contrast them with process claims." 1 D. Chisum, Patents § 1.02 (1994). The three product classes have traditionally required physical structure or material.

"The term machine includes every mechanical device or combination of mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." *Corning v. Burden*, 56 U.S. (15 How.) 252, 267 (1854). A modern definition of machine would no doubt include electronic devices which perform functions. Indeed, devices such as flip-flops and computers are referred to in computer science as sequential machines. A claimed signal has no physical structure, does not itself perform any useful, concrete and tangible result and, thus, does not fit within the definition of a machine.

A "composition of matter" "covers all compositions of two or more substances and includes all composite articles, whether they be results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." *Shell Development Co. v. Watson*, 149 F. Supp. 279, 280, 113 USPQ 265, 266 (D.D.C. 1957), *aff'd*, 252 F.2d 861, 116 USPQ 428 (D.C. Cir. 1958). A claimed signal is not matter, but a form of energy, and therefore is not a composition of matter.

The Supreme Court has read the term "manufacture" in accordance with its dictionary definition to mean "the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980) (quoting *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11, 8 USPQ 131, 133 (1931), which, in turn, quotes the Century Dictionary). Other courts have applied similar definitions. See *American Disappearing Bed Co. v. Arnaelsteen*, 182 F. 324, 325 (9th Cir. 1910), *cert. denied*, 220 U.S. 622 (1911). These definitions require physical substance, which a claimed signal does not have. Congress can be presumed to be aware of an administrative or judicial interpretation of a statute and to adopt that interpretation when it re-enacts a statute without change. *Lorillard v. Pons*, 434 U.S. 575, 580 (1978). Thus, Congress must be presumed to have been aware of the interpretation of manufacture in *American Fruit Growers* when it passed the 1952 Patent Act.

A manufacture is also defined as the residual class of product. 1 Chisum, § 1.02[3] (citing W. Robinson, *The Law of Patents for Useful Inventions* 270 (1890)).

A product is a tangible physical article or object, some form of matter, which a signal is not. That the other two product classes, machine and composition of matter, require physical matter is evidence that a manufacture was also intended to require physical matter. A signal, a form of energy, does not fall within either of the two definitions of manufacture. Thus, a signal does not fall within one of the four statutory classes of § 101.

Claim 19 is rejected as being dependent upon rejected claim 18.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4, 5, 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Thomas et al (U.S. Patent Number 6,460,052 B1).

As to claim 1, Thomas et al teaches a method of managing a repository containing multiple versions of an object (see Abstract), the method comprising:

establishing a plurality of configurations, each configuration containing no more than one version of an object (item 206 in Fig. 2, col. 5 lines 25-27. Since a configuration is a collection of object versions, it is able to store multiple versions of an object, but it is also able to store zero or one versions of an object. Therefore, the invention taught by Thomas et al is capable, without further programming or modification, to establish a plurality of configurations, each configuration containing no more than one version of an object.); and

associating no more than one configuration with a workspace from which a query can be issued (item 202 in Fig. 2, col. 5 lines 23-24. A workspace is associated with a

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set of configurations. Since a set may consist of a single configuration, the invention taught by Thomas et al is capable, without further programming or modification, of associating no more than one configuration with a workspace. Col. 7 lines 62-65 indicate that queries can be issued from workspaces, because users ask for data from the database, and are supplied the data through views based on a workspace.).

As to claim 2, Thomas et al teaches in response to receipt of the query:

retrieving an identity of the configuration from the workspace in which the query originates (col. 9 lines 59-65, when a query is submitted, the version control determines the user's working context);

determining a version of each object to be included in a response to the query, based on the identity of the configuration (col. 10 lines 3-5); and

presenting the response including the version of the object determined based on the configuration identity, without exposing any information related to versioning of the object (col. 3 lines 12-18).

As to claim 4, Thomas et al teaches a computer-readable storage medium encoded with the repository and with a sequence of instructions to perform the acts of Claim 1 (col. 15 lines 15-20 and 28-30).

As to claim 5, Thomas et al teaches a signal embodied in a carrier medium, the signal being encoded with a sequence of instructions to perform the acts of Claim 1 (col. 15 lines 15-20 and 28-30).

As to claim 6, Thomas et al teaches a computer (Fig. 6) comprising:
a storage medium comprising a repository containing multiple versions of an object (Fig. 1, col. 3 lines 29-30);
means, coupled to the storage medium, for establishing a plurality of configurations, each configuration containing no more than one version of an object (items 604 and 606 in Fig. 6, col. 15 lines 15-20, the means include a processor, memory, and instructions); and
means, coupled to the establishing means and coupled to the storage medium, for associating only one configuration with a workspace of a person who can issue a query (items 604, 606 and 610 in Fig. 6, col. 15 lines 15-20, the means include a processor, memory, and instructions, the processor and memory are coupled to a storage device).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al (U.S. Patent Number 6,460,052 B1) and further in view of Inglett (U.S. Patent Number 5,905,990).

As to claim 3, Thomas et al does not explicitly teach
associating the design time configuration with each of a plurality of persons
involved in designing the repository; and

associating the run time configuration with each of a plurality of software
application programs that use the repository during live operation.

Inglett teaches associating the design time configuration with each of a plurality
of persons involved in designing the repository (col. 6 lines 34-40); and

associating the run time configuration with each of a plurality of software
application programs that use the repository during live operation (col. 6 lines 40-44).

Therefore, it would have been obvious to one skilled in the art at the time the
invention was made to have modified the method of managing a repository containing
multiple versions of an object taught by Thomas et al by the method of maintaining a
run time configuration and a design time configuration taught by Inglett, because having
such configurations provides transparent tool access to element versions (Inglett col. 6
lines 29-30).

6. Claims 7-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al (U.S. Patent Number 6,460,052 B1), and further in view of Scott et al (U.S. Publication 2003/0115223 A1).

As to claim 7, Thomas et al teaches a method for versioning in a repository of a plurality of objects (see Abstract), the method comprising receiving an instruction to insert a first object, checking if the first object is contained in another object, and if not performing acts (a) and (b) else performing act (c):

(a) inserting into a first table, a first row comprising a plurality of values that define the first object, a unique identifier of the first object, and a version number of the first object (Thomas et al item 326 in Fig. 3A, showing a row inserted into a table, the row comprising values that define an object (column to the right of the column indicated by item 320), a unique identifier of the object (item 314), and a version number of the object (item 320)); and

(b) inserting into a second table, a second row comprising the unique identifier of the first object, the version number of the first object, and an identifier of a current configuration (Thomas et al item 206 in Fig. 2, showing a row inserted into a table, the row comprising the unique identifier of the object (item 222), the version number of the object (item 224), and identifier of a current configuration (item 250));

wherein acts (a) and (b) are performed in any order relative to one another (Thomas et al col. 9 lines 56-57 indicates performing act (a) (registering schema), followed by step (b) (generating view definitions)), and alternatively

Thomas et al does not explicitly teach (c) inserting into a third table, a third row comprising a plurality of values that define the first object, a unique identifier of the first object, and at least a current version number of a second object which contains the first object, the second object being not contained in any other object.

Scott et al teaches (c) inserting into a third table, a third row comprising a plurality of values that define the first object, a unique identifier of the first object, and at least a current version number of a second object which contains the first object, the second object being not contained in any other object (items 202, 203, 204, and 205 in Fig. 3. Lines 6-7 of paragraph [0051] indicate that item 202 is a unique identifier of a first object. Lines 1-3 of paragraph [0052] indicate that item 203 is a version number of the first object. Lines 1-2 of paragraph [0053] indicate that item 204 comprises values that define the object. Lines 1-7 of paragraph [0066] indicate that item 205 is a version number of a second object ("parent object") which contains the first object.).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified the method of managing a repository containing multiple versions of an object taught by Thomas et al by the method of storing a number of versions of a number of object taught by Scott et al, because storing the object version information together allows faster accessing of the information (Scott et al lines 6-8 of paragraph [0025]).

As to claim 8, Thomas et al, as modified, teaches a third object is located between the first object and the second object, and the first object is indirectly contained

in the second object, via the third object (Scott et al Fig. 1 shows a third object, XA2, located between XA3 and XA1).

As to claim 9, Thomas et al, as modified, teaches the second table comprises a plurality of configurations, each configuration containing no more than one version of the first object (Thomas et al item 206 in Fig. 2, col. 5 lines 25-27. Since a configuration is a collection of object versions, it is able to store multiple versions of an object, but it is also able to store zero or one versions of an object. Therefore, the invention taught by Thomas et al is capable, without further programming or modification, to establish a plurality of configurations, each configuration containing no more than one version of an object.).

As to claim 10, Thomas et al, as modified, teaches if the first object is contained in the second object, storing in the third row in the third table of act (c) a maximum version number of the second object, the current version number being stored as a minimum version number of the second object (Scott et al lines 1-4 of paragraph [0052], item 210 in Fig. 3, storing a row containing minimum ("ΔXA1") and maximum ("XA5") version numbers).

As to claim 11, the limitations of the claim are optional since the checking is done only if the second object belongs to a configuration that has been deployed. The

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configurations taught by Thomas et al are not deployed, and therefore, the limitations of claim 11 are optional.

As to claim 12, Thomas et al, as modified, teaches receiving another instruction to update the first object, and checking if the first object is contained in any other object (Thomas et al col. 8 lines 42-44).

As to claim 13, Thomas et al, as modified, teaches if the first object is not contained in any other object:

checking if the first object belongs to a configuration that has been deployed and if not deployed then updating a row in the first table that holds the first object, and if deployed then creating a new version of the first object in the first table (Thomas et al col. 9 lines 29-30, copying a table creates a new version of all objects contained in the table).

As to claim 14, Thomas et al, as modified, teaches if the first object is contained in the second object:

checking if the second object is deployed, and if deployed creating a new version of the second object (Thomas et al col. 9 lines 29-30, copying a table creates a new version of all objects contained in the table).

As to claim 15, Thomas et al, as modified, teaches receiving another instruction to delete the first object, and checking if the first object is contained in any other object (Thomas et al col. 11 lines 40-43).

As to claim 16, Thomas et al teaches if the first object is not contained in any other object:

checking if the first object belongs to a configuration that has been deployed and if not deployed then deleting the first row in the first table; and

deleting the second row in the second table (Thomas et al col. 11 lines 40-43).

As to claim 17, Thomas et al, as modified, teaches if the first object is contained in the second object:

checking if the second object is deployed, and if deployed creating a new version of the second object (Thomas et al col. 9 lines 29-30, copying a table creates a new version of all objects contained in the table).

As to claim 18, Thomas et al teaches a computer-readable storage medium encoded with a sequence of instructions to perform the acts of Claim 7 (Thomas et al col. 15 lines 15-20 and 28-30).

As to claim 19, Thomas et al, teaches the computer-readable storage medium of claim 18 further comprising the repository (Fig. 1, col. 3 lines 29-30)

Thomas et al does not explicitly teach the repository comprising the third table, the third table comprising a first column for holding a maximum version number of the second object and a second column for holding a minimum version number of the second object, the current version number being stored in the second column.

Scott et al teaches the repository comprising the third table, the third table comprising a first column for holding a maximum version number of the second object and a second column for holding a minimum version number of the second object, the current version number being stored in the second column (lines 1-4 of paragraph [0052], item 210 in Fig. 3, storing in a table a row containing minimum ("ΔXA1") and maximum ("XA5") version numbers).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified the means for managing a repository containing multiple versions of an object taught by Thomas et al by the means for storing a number of versions of a number of object taught by Scott et al, because storing the object version information together allows faster accessing of the information (Scott et al lines 6-8 of paragraph [0025]).

As to claim 20, Thomas et al, as modified, teaches a signal embodied in a carrier medium, the signal being encoded with a sequence of instructions to perform the acts of Claim 7 (Thomas et al col. 15 lines 15-20 and 28-30).

As to claim 21, Thomas et al teaches a computer (Thomas et al Fig. 6)

comprising:

a storage medium comprising a repository containing multiple versions of an object (Thomas et al Fig. 1, col. 3 lines 29-30);

means, coupled to the storage medium, responsive to an instruction to insert the object, for checking if the object to be inserted is contained in another object and if so generating a second signal else generating a first signal (Thomas et al items 604 and 606 in Fig. 6, col. 15 lines 15-20, the means include a processor, memory, and instructions);

means, coupled to the storage medium and to the means for checking, responsive to the first signal, for inserting into a table, a row comprising a plurality of values that define the object, a unique identifier of the object, and a version number of the object and inserting into another table (Thomas et al items 604, 606 and 610 in Fig. 6, col. 15 lines 15-20, the means include a processor, memory, and instructions, the processor and memory are coupled to a storage device), another row comprising the unique identifier of the object, the version number of the object, and an identifier of a current configuration (Thomas et al items 604, 606 and 610 in Fig. 6, col. 15 lines 15-20, the means include a processor, memory, and instructions, the processor and memory are coupled to a storage device); and

Thomas et al does not explicitly teach means, coupled to the storage medium and to the means for checking, responsive to the second signal, for inserting into yet another table, yet another row comprising a plurality of values that define the object, a

unique identifier of the object, and at least a current version number of said another object in which the object is contained.

Scott et al teaches means, coupled to the storage medium and to the means for checking, responsive to the second signal, for inserting into yet another table, yet another row comprising a plurality of values that define the object, a unique identifier of the object, and at least a current version number of said another object in which the object is contained (items 202, 203, 204, and 205 in Fig. 3. Lines 6-7 of paragraph [0051] indicate that item 202 is a unique identifier of a first object. Lines 1-3 of paragraph [0052] indicate that item 203 is a version number of the first object. Lines 1-2 of paragraph [0053] indicate that item 204 comprises values that define the object. Lines 1-7 of paragraph [0066] indicate that item 205 is a version number of a second object ("parent object") which contains the first object.).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified the means for managing a repository containing multiple versions of an object taught by Thomas et al by the means for storing a number of versions of a number of object taught by Scott et al, because storing the object version information together allows faster accessing of the information (Scott et al lines 6-8 of paragraph [0025]).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- U.S. Patent Number 6,868,425 B1, issued to Bergstraesser et al, for teaching a method of maintaining configurations and workspaces for managing versions of objects.
- U.S. Patent Number 7,054,885 B1, issued to Hoffman et al, for teaching a workspace for managing versions of the same item.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul J. Sommerfeld whose telephone number is 571 272-6545. The examiner can normally be reached on M-F 7:45 am - 4:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on 571 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



TIM VO
PRIMARY EXAMINER